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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,662	02/28/2002	Shunsuke Sato	50212-358	2508

7590 12/23/2003

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Washington, DC 20005-3096

EXAMINER

PHAN, THANH S

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,662

Applicant(s)

SATO ET AL.

Examiner

Thanh S Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art; AAPA hereinafter; in view of Okubora et al. [6,445,475] and Shibata [US 5,434,747].

AAPA disclose an optical data link [figure 15A] comprising a mounting member [2] having a substrate [4] with a plurality of holes, and a plurality of electrically conductive pins [8] passing through said plurality of holes of said substrate; an optical element assembly [6], mounted on said mounting member;

AAPA disclose the claimed invention except for: a plurality of circuit boards comprising a circuit board having a pair of surface with an electrically conductive layer connected to at least one pin of said plurality of electrically conductive pins, each of said pair of surfaces mounting an electronic component; and means for supporting said circuit board so as to be spaced apart from said mounting member.

Okubora et al. disclose an optical module [figure12] with a plurality of circuit boards comprising a circuit board [12] having a pair of surface with an electrically conductive layer connected to at least one pin of said plurality of electrically conductive

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pins, each of said pair of surfaces mounting an electronic component; and means [40] for supporting said circuit board so as to be spaced apart from said mounting member .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Okubora et al.'s circuit with AAPA's module for the purpose of increasing capacities.

Shibata discloses an optical transceiver module [figure 5] comprising a first and second support members [5] having a substantially equal thickness for supporting of an optical element assembly.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the supporting members design of Shibata with AAPA and Okubora et al. for the purpose of preventing cross-talk between the electronics.

Regarding claim 2, Shibata further discloses wherein the cover being electrically conductive [column 3, line 3].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the metal cover of Shibata with AAPA as modified for the purpose of providing EMI shielding.

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: the prior art of record does not teach or suggest in the claimed combination a substrate (second circuit board) having holes to accommodate components mounted on the bottom of the first circuit board .

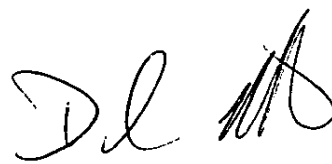
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh S Phan whose telephone number is 703-305-0069. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S Martin can be reached on 703-308-3121. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7721.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

tsp

A handwritten signature in black ink, appearing to read 'DL' followed by a stylized flourish.

DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800